



# SPARK GAP

Vol. 41, Issue 8, August 2024 *MARC - Serving Central Indiana Communities*

## *On Our MARC:*

Please join us Saturday, August 17 at 8am for our monthly MARC meeting. We meet at the Johnson County REMC building in Franklin. Next month is our Annual Picnic which will be held at the Northwest Annex Shelter on Fry Road in Greenwood. Plan to arrive about 11am and bring a dish to share.

If you would like to run for a MARC Board position, President, Vice President, Secretary, or Treasurer, please make your desire known to Art Bleicher WB9CHR, or let us know no later than Saturday's meeting. All nominations for a Board Position must be made known by the close of Saturday's meeting. You may add your name for a position during the meeting Saturday if you prefer. The ballots will be counted at the picnic in September.

I look forward to seeing you Saturday.

73,  
Tim  
WC9G





## **AUGUST BIRTHDAYS**

*W9WMJ - Marty Justis*  
*KD9WVD - James Bryant*  
*K9JRB - Jim Bricker*

### **Upcoming Section, State, and Division Conventions**

- August 17 - 18 | [Huntsville Hamfest](#), sponsoring the ARRL Southeastern Division Convention, Huntsville, Alabama
- August 22 - 25 | [Northeast HamXposition](#), sponsoring the ARRL New England Division Convention, Marlborough, Massachusetts
- August 30 - September 1 | [Shelby Hamfest](#), sponsoring the ARRL North Carolina State Convention, Shelby, North Carolina
- August 31 | [Summer Symposium](#), sponsoring the ARRL Santa Barbara Section Convention, Camarillo, California
- September 8 | [ARRL Southern New Jersey Section Convention](#), Mullica Hill, New Jersey
- September 20 - 22 | [Duke City Hamfest](#), sponsoring the ARRL New Mexico State Convention, Albuquerque, New Mexico
- September 21 - 22 | [Midwest Superfest](#), sponsoring the ARRL Illinois Section Convention, Chillicothe, Illinois
- September 28 | [Red River Radio Amateurs Hamfest](#), sponsoring the ARRL Dakota Division Convention, West Fargo, North Dakota
- October 5 | [Wichita Area Hamfest](#), sponsoring the ARRL Kansas State Convention, Wichita, Kansas
- October 5 | [Northstar Radio Convention](#), sponsoring the ARRL Minnesota State Convention, Brooklyn Park, Minnesota
- October 5 | [Rock Hill Hamfest](#), sponsoring the ARRL South Carolina Section Convention, Rock Hill, South Carolina.
- Search the [ARRL Hamfest and Convention Database](#) to find events in your area.

# New York High School Helps License Amateur Radio Operators

..... ARRL News August 2024

On August 1, 2024, Steve Goodgame, K5ATA, ARRL Education and Learning Manager, took a train trip to New York City to visit the Staten Island Technical High School. He was there to help administer amateur radio exams to 49 students and all passed their exams. Several upgraded their licenses from General to Extra class and two students went from unlicensed to Extra class in one sitting.

Their teacher, Everton Henriques, KD2ZZT, attended ARRL's Teachers Institute on Wireless Technology TI - 1 last year and TI - 2 this year. Since then, Everton has helped over 100 kids successfully test for their amateur radio licenses. He has built a program incorporating HF, local repeater use, foxhunting, and space communications and has plans to incorporate mesh networking with his students this coming school year.

On August 6, 2024, Henriques was helping his students build antennas to help make contact with the International Space Station. They made a 5-element VHF "bad boy" antenna with a mounting mechanism to rotate and pitch the heading using 3D-printed materials, PVC, and aluminum rods. They tried using an IC-2730a VHF/UHF radio on medium power. While that didn't go as well as planned, they were able to hear a lot of activity on 70 centimeters.

Staten Island Technical High School began as a New York City public high school in 1988. Its student body is comprised of lifelong learners, innovation facilitators, contributors to the betterment of society and intellectually inquisitive young men and women. In September of 2005, the school was granted the status as New York City's 7th Specialized High School by the New York City Department of Education. New York City's Specialized High Schools are comprised of the most academically gifted and talented students.



# Wanna work with satellites? Get an amateur radio license

July 26, 2024 By [Dan KB6NU](#)

In the June 2024 issue of IEEE Spectrum, the article, “The LEO Satellite Industry Needs More Engineers,” pointed out the need for more engineers to work in this burgeoning industry. It points out that the LEO satellite market is expected to grow from US \$4 billion in 2022 to US \$7 billion in 2031.



The article then focuses on the efforts of the IEEE Low-Earth-Orbit Satellites and Systems (LEO SatS) project. The article points out that it has held a number of workshops and other events to educate engineers and students about opportunities in the industry, but it makes no mention of amateur radio. I think that's a mistake, and I've just emailed the leader of the program, Witold Kinsner, reminding him of the role that amateur radio could play.

Where else can students get actual experience with LEO satellites? Not only is there AMSAT, but many student groups have sent up their own LEO satellites in the past.

The article points out that LEO SatS has also sponsored a workshop on ground stations. I would refer them to the SatNOGS, which is building a network of open-source ground stations.

Incorporating amateur radio into the work of LEO SatS would be a win-win for LEO SatS and amateur radio. Aspiring satellite engineers would get hands-on experience with the technology, amateur radio satellite projects would get access to the latest technology, and the satellite industry would eventually get some trained engineers and technicians.

*Dan, KB6NU, is the author of the “No Nonsense” amateur radio license study guides and blogs about amateur radio at [KB6NU.Com](#). When he's not picking nits about the name of our hobby, he teaches ham radio classes and operates CW on the HF bands. You can email him at [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).*



# **TOUCH-A-TRUCK 2024**

## **MT. AUBURN CHURCH GREENWOOD**

**by Bob, N9SIU**

It turned out to be a beautiful summer day at Mt. Auburn Church in Greenwood. The M.A.R.C. Ham Radio Exhibit was set up early in the morning and Tim, WC9G was on the air making contacts by 9 AM. During the day from 10 AM to 2 PM M.A.R.C. had lots of kids and some adults make their first radio contact on Ham Radio. The participants were given a First Contact certificate of who they made contact with. Many thanks should go to Jim, KB9JMU for talking to the kids when a contact was made. One participant even had a chance to speak to his Grandfather on our Club Repeater. The Touch-A-Truck event is focused on the family and there were plenty of kids, parents and grandparents there. According to Mt. Auburn Church there were over 2,500 people attending this year.

This event puts Amateur Radio close to the public with time to answer questions.

Thanks to all that participated in Touch-A-Truck this year.



Please visit the M.A.R.C. Website for more pictures of the event.  
[www.midstatehams.org](http://www.midstatehams.org)

# ARRL Urges Protecting the Amateur Radio 902-928 MHz Band

08/15/2024 ..... ARRL News

The Federal Communications Commission (FCC) accepted for public comment a Petition for Rulemaking filed by NextNav Inc., a licensee in the 900-MHz Location and Monitoring Service (LMS), to completely reconfigure the 902-928 MHz band and replace the LMS with high-powered 5G cellular and related location services.

The FCC Notice requested comment on the effects that NextNav's proposals would have on amateur radio operations in the band. ARRL® The National Association for Amateur Radio® is preparing comments urging protection of existing and future amateur uses in this band and urges all amateurs to file their own comments describing their activities in this band and the expected effect of the proposed changes. [Click here for a guide to filing comments.](#)

NextNav currently holds licenses in the 900-MHz band that authorize it to provide services limited to determining the location and status of mobile radio units. NextNav ties its request to provide high-power broadband, cellular and location services to the vulnerabilities of the current satellite-based GPS system and argues that implementation of its proposal would complement GPS by providing an alternative nationwide terrestrial location system in addition to cellular and broadband services. Under its proposal, NextNav would be designated the sole nationwide licensee for this spectrum in exchange for its more limited licenses.

The new nationwide license would authorize NextNav to provide much higher-powered traditional broadband and 5G cellular services as well as the related location service occupying 15 of the total 26 megahertz available in the band. The reconfiguration proposed by NextNav would create a 5-megahertz-wide uplink subband at 902-907 MHz paired with a 10-megahertz downlink subband at 918-928 MHz. The 5-megahertz uplink subband would be limited to use by mobiles with a maximum of 3 watts ERP. On the 10-megahertz downlink subband, up to 2000 watts ERP would be permitted in rural areas and 1000 watts ERP in urban and suburban areas, radiating from tower structures that could reach 1000 or more feet above average terrain. These configurations reflect the FCC's rules for standard cellular configurations that have been adopted to govern a number of other bands used for similar 5G and like services.

Although uses by the Amateur Radio Service in this band are secondary to LMS, NextNav is proposing substantial technical and use changes that would completely alter the foundation upon which the current rules and spectrum sharing arrangements rely and undercut shared use of the band by amateurs as well as a variety of other users. In addition, NextNav proposes deletion of a specific interference provision in the

Commission's rules that was adopted to encourage and protect continued sharing with amateurs and other secondary users.

NextNav, in its petition, argues without evidence that the changes that it proposes to the 902-928 MHz band "will not impede amateur operations." In an 8-page description of NextNav's proposal released by the FCC's Wireless Telecommunications Bureau, the FCC staff asks a series of questions that would clarify the proposal and help the Commission ascertain the likely effect of the proposed changes on existing users if the requested changes were adopted. Comment was specifically requested on the extent of amateur operations in the band, the potential impact of the proposed changes, any other spectrum options that may exist, and the costs for relocation's if other options exist.

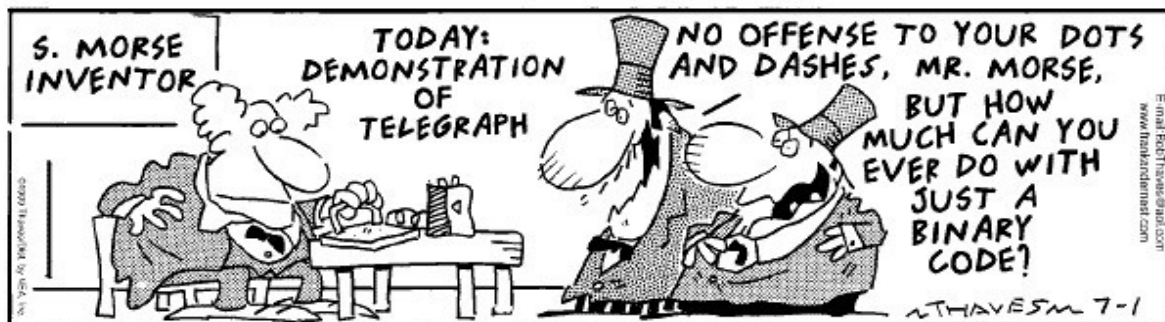
ARRL is preparing comments urging protection of existing and future amateur uses in this band. ARRL urges all amateurs to study the proposal and file their own comments describing their activities in this band and the expected effect of the proposed changes. The filing deadline is September 5, 2024. Replies to comments are due by September 20, 2024.

..... For more information please go to the ARRL website, [www.arrl.org](http://www.arrl.org)

## AUXCOM/ARES INFORMATION

This is a reminder for the information shared at last month's club meeting that there will not be the usual first Wednesday of the month meeting for the AUXCOM/ARES. Instead, please join us after the August 17 MARC for an exercise to prepare for Goblin Patrol. We will begin immediately following the license testing and aim to be done close to noon. For the exercise, we will be going to the locations that we cover for Goblin Patrol and conducting a net to validate that we are able to establish communications from all locations. Recommended equipment is a mobile transceiver configured for the MARC repeater.

Kyle, AD9CR



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## INDIANA HAMFESTS 2024

Elkhart East Hamfest, ARRL Central Division Convention

Start Date: 08/03/2024

End Date: 08/03/2024

Location: Northern Indiana Event Center

21565 Executive Parkway

Elkhart, IN 46514

Website: <http://elkharteasthamfest.com>

Sponsor: Northern Indiana K9DEW Repeater Network

Type: ARRL Hamfest

Talk-In: 147.330+ / 131.8

Public Contact: Dewey Thrash , K9DEW

53464 Baywater Place Bristol, IN 46507

Phone: 574-370-2436

Email: [elkharthamfest@gmail.com](mailto:elkharthamfest@gmail.com)

Hendricks County Tailgate Fest

Start Date: 08/10/2024

End Date: 08/10/2024

Location: Avon United Methodist Church

6850 E. US Hwy 36

Avon, IN 46123

Sponsor: Ham Emergency Radio Operations

Type: ARRL Hamfest

Talk-In: 145.130 MHz PL-Tone 88.5

Public Contact: Kenneth A Kayler , KC9SQD

3090 Clover Dr. Plainfield, IN 46168

Phone: 317-874-7068

Email: [kc9sqd425@gmail.com](mailto:kc9sqd425@gmail.com)

ARANCI Hamfest

Start Date: 08/11/2024

End Date: 08/11/2024

Location: Lake Village Community Center

9728 North 300 West

Lake Village, IN 46349

Sponsor: ARANCI

Type: ARRL Hamfest

Talk-In: 145.330 pl 131.8

Public Contact: Michael Swiader , KA9E

PO Box 215 Lake Village, IN 46349

Phone: 815-409-5070

Email: [ka9e@yahoo.com](mailto:ka9e@yahoo.com)



Hoosier Hills Hamfest  
Start Date: 10/12/2024  
End Date: 10/12/2024  
Location: Lawrence County 4-H Fairgrounds  
11265 US-50  
Bedford, IN 47421  
Website: <https://hoosierhillshamfest.com/>  
Sponsor: Hoosier Hills Ham Club  
Type: ARRL Hamfest  
Talk-In: 146.73- PL/107.2  
Public Contact: Tim Wray , KB9SNL  
PO Box 891 Bedford, IN 47421  
Phone: 812-675-6733  
Email: [bwrs1996@gmail.com](mailto:bwrs1996@gmail.com)



## **CLUB DUES FOR 2024**

**It is that time of year for your membership dues for the Mid-State Amateur Radio Club. The annual membership dues is \$25.00 per year and has not changed from last year.**

**This also a good time to update any of your information for club records such as license upgrade, change of address, contact information or call sign.**

**This is also a good opportunity for new amateurs to join our club and join in our club activities for 2024.**

**Please see Jacki Frederick, KI6QOG M.A.R.C. Treasurer**



## MID-STATE AMATEUR RADIO CLUB

The Mid-State Amateur Radio Club meets the **THIRD SATURDAY 8:00 AM** of each month  
at the Johnson County REMC building 750 International Dr. Franklin, IN 46131

See our website, [www.midstatehams.org](http://www.midstatehams.org), for maps on how to get to our meeting.

Everyone is welcome; you do not have to be a *HAM* to attend our meetings or a member of the club.

**W9MID Repeater:**  
**Offical SkyWarn Repeater for Johnson County**

146.835/  
146.235 MHz  
(151.4 Hz PL Tone)

**W9MID Repeater:**

443.525/  
448.525 MHz  
(151.4 Hz PL Tone) YEASU SYSTEM FUSION (C4FM)

**Club Officers:**

President: Tim Aldridge - WC9G  
Vice President: Rhonda Curtis - WS9H  
Secretary: Jim Adams – KB9JMU  
Treasurer: Jacki Frederick - KI6QOG  
Repeater Trustee: Chris Frederick – KQ9Y  
Club Historian: Jack Parker – W8ISH  
Club P.I.O. : Rhonda Curtis – WS9H

**Weekly Net: Sunday evening 7:00 PM ARES/RACES members and ALL RADIO AMATEURS**  
**146.835/146.235 MHz (151.4 Hz PL Tone)**

**The Official Newsletter of the Mid-State Amateur Radio Club**  
**857 Lionshead Lane**  
**Greenwood, Indiana**  
**46143**

**Spark Gap Editor: Robert LaGrange N9SIU**

*Please send your articles to my email: [n9siu@yahoo.com](mailto:n9siu@yahoo.com) no later than the 3rd week of the month.*



**Thanks to Johnson Co. REMC for the use of their building for meetings and testing.**